

Application Serial No. 10/570111
Docket No.: 1093-149 PCT US
Response to May 8, 2009
Non-Final Office Action

REMARKS

The Non-Final Office Action mailed May 8, 2009 and the references cited therein have been carefully considered and Applicants respectfully request reconsideration. Claims 1-24 are currently pending in this application, although Claims 14-20 have been withdrawn in response to a restriction requirement. By this Response, Applicants have amended Claims 1 and 3-5 and cancelled Claim 2. The amendments to Claims 1-5 are intended to convert Claims 2-5 to independent form incorporating all the limitations of previously presented independent Claim 1. Accordingly, no new matter is introduced by these amendments.

Applicants respond specifically below to the issues raised in the subject Office Action and respectfully request reconsideration thereof.

Claim Rejections Under 35 U.S.C. §103(a)

Claims 1-13 and 21-24 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Published Patent Application No. 2005/0042391 to **Ryan** et al. in view of the PCT Publication WO 02/061470 to **Moia** et al. (of which U.S. Patent No. 7,201,948 is an English language equivalent). Applicants traverse this rejection as set forth below.

Ryan discloses a method for the manufacture of patterned optical elements such as retarders or liquid crystal elements for use in optical retarders. Ryan discloses:

forming an alignment layer comprising a spatially patterned periodic surface release microstructure into a suitable receptive material;

laying down a coating material that exhibits a liquid crystal phase onto the alignment layer enabling the alignment of the coating material with the microstructure of the alignment layer; and

forming the coating material into a solid film such that the molecular alignment between film and alignment layer is substantially preserved,

(see Ryan [0016] – [0018]).

It is stated in the subject Office Action at page 2 that the disclosure of Ryan at paragraph 27 “renders obvious the aspect of applying the LCP layer as a film”, however, it is respectfully submitted that paragraph 27 of Ryan does not disclose or reasonably suggest the application of a film or any layer in a solid state. A closer reading of paragraph 27 of Ryan indicates that it does not suggest applying a solid film but rather that the coating material can be deposited as a liquid crystal or “by applying the coating **in solution** and removing solvent to the point where a transformation to LC-like behavior occurs”. Thus, the “some other form” merely refers to another liquid form that is not in liquid crystal phase. Thus, a preliminary coating of liquid crystal material is applied and transformed by the application of heat into a material which features the same characteristics as a liquid crystal material.

Additionally, with reference to Ryan paragraph [0087 – [0091], contrary to the contention in the subject Office Action, the additional layers disclosed by Ryan are not “**applied**” simultaneously with the coating layer, but rather are “**formed**” simultaneously or sequentially. The distinction in this terminology is significant because it is the liquid layers that are being formed and not a reference to a solid film which is being applied. Thus, this is consistent with the earlier disclosure in paragraph [0027] where a non-solid coating is applied. It is submitted that the primary focus of Ryan is to deposit a “coating material” on a microstructure of an orientation layer and forming the coating material into a solid film. It is respectfully submitted that when determining obviousness one must be aware “of the distortion caused by hindsight bias and must be cautious of arguments reliant upon ex-post reasoning.” *KSR Int'l. Co. v Teleflex Inc.* 550 U.S. 392, 421 (2007) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 36 (1966) (warning against a “temptation to read into the prior art the teachings of the invention in issue”)). Thus,

taking into account the overall teachings of Ryan it is clear that the disclosure relates to the application of liquid coatings that either include a liquid crystal structure or are altered to achieve such a structure.

Moia discloses a method of manufacturing a structured optical device by coating an alignment layer and a liquid crystal polymer network layer on a substrate. The liquid crystal polymer network layer is applied using an inkjet printer. In the subject Office Action, Moia is cited for teaching that the optical element produced by Ryan could be personalized through variable alignment layer printing methods as taught by Moia. Additionally, the Office Action presumably cites Moia for teaching that the substrate could be a sticker film to be applied to a security document (although such teaching from Moia is not explicitly discussed in the Office Action).

As an initial matter, it should be noted that as with Ryan above, Moia fails to disclose the application of a film body to a substrate that is personalized prior to the application of the film body. Both references deal with liquid coating or layers applied by inkjet and thus fail to disclose the application of a solid film body as recited in the claims.

Additionally with regard to the personalization techniques disclosed by Moia, it is not technically possible to achieve a personalization of the orientation layer by a partial printing of the polarization layer and subsequent polarization of this layer by using a replicated microstructure.

It should be understood that with regard to amended Claim 1, the orientation layer is not applied by partial printing, but rather the orientation layer is personalized by partial (over)printing on the orientation layer. Also with regard to Claims 3, 22 and 23, differently oriented orientation layers are transferred. This means the method claims as presently recited do not describe a partial printing of the orientation layer but rather that the orientation layer is partially deactivated by printing.

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Additionally, a method of partial printing of a layer by means of an inkjet and subsequently imparting orientation characteristics to it by exposure to polarized light (as disclosed by Moia) is not combinable with a method of generating an orientation layer which is created by replication of a surface release in a substrate (as disclosed by Ryan). In accordance with an aspect of the present invention, the printing of the orientation layer is not applied directly (positive printing) as it is in the case of Moia, but rather the complete orientation layer is treated afterwards in a way (erasing) such that certain parts are not oriented (negative printing), as is recited in amended Claims 1, 3, 4 and 5.

Thus, the combination of Ryan and Moia fail to teach all the elements of the claimed invention, particularly as recited in independent Claims 1, 3, 4, 5 and 21. What is more, one of ordinary skill would not be motivated to combine Ryan and Moia as suggested in the subject Office Action to arrive at the claimed invention.

Applicants further submit that Claims 6-13 and 21-23, which ultimately depend from Claims 1 and 21, respectively, are similarly patentable over the art of record by virtue of their dependence. Also, Applicants submit that Claims 6-13 and 22-24 define patentable subject matter in their own right. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejections of Claims 1-13 and 21-24 under 35 U.S.C. §103(a).

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Conclusion

Entry of the amendments herein and favorable consideration of Claims 1, 3-13 and 21-24 is hereby solicited. Applicants respectfully request reconsideration and allowance of the claims presented. In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner has any questions or suggestions to expedite allowance of this application, the Examiner is cordially invited to contact Applicants' attorney at the telephone number provided.

Respectfully submitted,

/tony a. gayoso/
Tony A. Gayoso
Registration No.: 37,331
Attorney for Applicants

HOFFMANN & BARON, LLP
6900 Jericho Turnpike
Syosset, New York 11791-4407
(516) 822-3550
TAG:lg
319804_1.DOC